

Figure 1

A motion vector detection apparatus for detecting a motion vector by performing block matching between a target block comprising a plurality of pixels in a current image, and a reference block comprising a plurality of pixels in a predetermined reference area in a past image, comprises: a first address generator for generating addresses of data in the target block and addresses of data in the reference area; a first storage unit for holding data of the reference area designated by the first address generator; a second storage unit for holding data of the target block designated by the first address generator; a second address generator for generating addresses of data to be outputted from the first storage unit and the second storage unit; and a motion vector detector for detecting a motion vector by using the data outputted from the first storage unit and the data outputted from the second storage unit. The second address generator performs subsampling on the addresses of the data to be outputted from the first storage unit and the second storage unit so that the addresses are sampled in a checker pattern with respect to pixel arrays corresponding to images of the reference block and the target block. Therefore, the amount of data to be processed is reduced, resulting in increased processing speed and reduced power consumption.